

WORK OF THE WORMS

THEIR IMPORTANT PART IN THE HISTORY OF THE WORLD.

Objects of Antiquity That Have Been Preserved by Them—Some of the Peculiarities of the Sense of the Earthworms.

The common earthworm, despised by man and heedlessly trodden underfoot, fulfills a part in nature that would seem incredible but for the facts revealed by the patient and long continued researches of Darwin. "Worms," says Darwin, "have played a more important part in the history of the world than most persons would at first suppose." Let us follow Darwin and see how this apparently insignificant creature has changed the face of nature. We will first consider the habits and mode of life of the earthworm. As every one knows, the worms live in burrows in the superficial layer of the ground. They can live anywhere in a layer of earth, provided it retains moisture, dry air being fatal to them. They can, on the other hand, exist submerged in water for several months. They live chiefly in the superficial mold less than a foot below the surface, but in long continued dry weather and in very cold seasons they may burrow to a depth of eight feet. The burrows are lined by a thin layer of earth, voided by the worms, and end in small chambers in which they can turn around.

The burrows are formed partly by pushing away the earth, but chiefly by the earth being swallowed. Large quantities of earth are swallowed by the worms for the sake of the decomposing vegetable matter contained in it, on which they feed. The earth thus swallowed is voided in spiral heaps, forming the worm castings. In this case the worm obtains food and at the same time excavates its burrows.

In addition to the food thus obtained half decayed leaves are dragged into the burrows, mainly for food, but also to plug the mouths of the burrows for the sake of protection. Worms are also fond of meat, especially fat. They will also eat the dead bodies of their relatives. They are nocturnal in habit, remaining, as a rule, in the burrows during the day and coming out to feed at night.

The earthworm has no eyes, but is affected by strong light if exposed to it for some time. It has no sense of hearing, but is sensitive to the vibrations of sound. The whole body is sensitive to touch. There appears to be some sense of smell, but this is limited to certain articles of food, which are discovered by the worm when buried in earth, in preference to other bodies not related. The worm appears to have some degree of intelligence from the way in which it draws the leaves into its burrows, always judging which is the best end to draw them in by. This is remarkable in so lowly organized an animal, being a degree of intelligence not possessed by many animals of more complex organization. For instance, the ant can often be seen dragging objects along haphazardly instead of taking them the easiest way.

As we have seen, vast quantities of earth are continually being passed through the bodies of worms and voided on the surface as castings. When it is stated that the number of worms in an acre of ordinary land suitable for them to live in is 53,000 we can imagine the great effect which they must have on the soil.

They are, in fact, continually plowing the land. At one part of the alimentary canal of the worm is a gizzard, or hard muscular organ, capable of grinding food into fine particles. It is this gizzard which is the main factor in trituration of the soil, and it is aided by small stones swallowed with the earth, which act as millstones.

In consequence of the immense amount of earth continually being brought to the surface by worms it is not difficult to understand how objects, such as stones, rocks, etc., lying on the surface will in course of time become gradually buried in the ground. Owing to the burial of stones and other objects by the action of worms ancient monuments, portions of a Roman villa and other objects of antiquity have been preserved. These have been gradually buried by the worms and so preserved from the destructive effect of rain and wind. Many Roman remains were studied by Darwin and traces of the action of worms found, to which action their preservation was mainly due. The sinking of the foundations of old buildings is due to the action of worms, and no building is safe from this unless the foundations are laid lower than the level at which the worms can work—namely, about eight feet below the surface.

Another useful effect produced by worms is the preparation of the soil for the growth of seedlings. By their agency the soil is periodically sifted and exposed to the air and in this way is able to retain moisture and absorb soluble substances of use for the nutrition of plants.

Dr. Johnson's Kiss.

On the eve of leaving London for Canada Mrs. Brooke, who wrote "The History of Emily Montague," the first novel written in Canada, gave a farewell party, Hannah More, Johnson and Bowtell being in the company. Dr. Johnson was obliged to leave early and apparently departed after wishing his best wishes to the company. Shortly after a servant whispered to Mrs. Brooke that a gentleman was waiting below to speak to her. Rushing downstairs, the fair novelist found the venerable bibliographer. "Madam," said he ponderously, "I sent for you downstairs that I might kiss you, which I did not choose to do before so much company."

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THE MOOSE HUNTER.

How He Entices the Bull With a Birch Bark Trumpet.

The moose calling hunter is one who with a birch bark trumpet imitates the bellow of the cow moose and tempts the bull forth into plain view for an easy shot.

Though the least sportsmanlike, it is the most effectual way of getting bull moose. Fortunately for them, it can be practiced only for a fortnight or so at the beginning of the season and in exactly the right weather and surroundings.

Dead calm is essential. If there be wind from the moose to you he cannot hear your call; if it be from you to the moose he smells you and flies to far regions. In a calm the call can be heard for miles, so far indeed that even if the moose came directly and quickly he might be an hour or more in getting to your stand. I once called from a hill at sunset and learned later that my friends four miles away heard me distinctly, and therefore moose with his keen hearing might have heard it five or six miles off.

The experienced hunter begins very low, as there is always a possibility of a bull lurking in some near thicket, and calls not more than once in ten minutes, some think every twenty minutes often enough. It is probably too fast once the response has come. The bull's answer is a deep, long grunt, varied by the snapping of branches as he plunges forward through the woods, but stopping at times to thrash some bush in his course.

It is indeed one of the most impressive sights in the animal world when at length in the last dim afterglow the much heralded monster heaves his bulk into view, towering the shrubbery like an elephant, looming huge and black against the last streak of red light. No matter how much we may be expecting it, the coming is always a thrilling surprise. We knew how big he was, yet how startlingly huge he looks, and those heavy antlers, a heavy burden for a man, he switches about as an Indian does the eagle feathers in his hair.—Ernest Thompson Seton in Scribner's.

Irring's Wonderful Self Denial.
There was one special act in Irring's young life on the stage that has a lesson for all young artists. When, in 1890, having then had three full years of experience as a player, he got a three years' engagement in London and made his appearance at the Theatre, he came to the conclusion that his work was not yet good enough for metropolitan favor. So he resolutely bent himself to the task before him and, with the reluctant consent of his manager, canceled his engagement. He went back to the weary routine and labor and hardship of the provinces till the time should come for a more worthy effort. When we remember that a London engagement was, and is, the goal of an ambitious actor's hopes and that it means regular work and regular pay and an ever increasing opportunity for distinguishing oneself, we can understand that his self denying resolution was little less than heroic. When, however, he did come again, seven years later, he had his reward. He came to stay. He knew his work then and knew that he knew it. His record from that on was an unbroken one of success and honor. His fight was won.—Success Magazine.

There is more Catarrh in this section of the country than all other diseases put together, and until the last few years was supposed to be incurable. For a great many years doctors pronounced it a local disease and prescribed local remedies, and by constantly failing to cure with local treatment, pronounced it incurable. Science has proven Catarrh to be a constitutional disease and therefore requires constitutional treatment. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, Ohio, is the only constitutional cure on the market. It is taken internally in doses from 10 drops to a teaspoonful. It acts directly on the blood and mucous surfaces of the system. They offer one hundred dollars for any case it fails to cure. Send for circulars and testimonials.

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If you want to be contented and happy, if you want to experience a perpetual satisfaction as you go along, choose a creative vocation. A routine life where there is nothing new, nothing special to be learned, is discouraging, paralyzing to ambition, but creative work, which makes a perpetual call upon originality and individuality, is a constant tonic. Nothing gives greater satisfaction than the daily feeling that you have created, that you have brought something new into the world from your brain—something which has taxed your ingenuity and which makes you feel that you have added to the real wealth of the world; that you have not been merely working over what somebody else started or created, but that you have brought something out of the mysterious realm of mind, made it tangible and effective and started a new impulse in the world.

We get closer to nature when we are creating, whether in art, in literature, in invention or in working at new and progressive ideas. We can feel our mind reach out into infinity and grasp and bring back something fresh, new, something never seen on this earth before. It is perpetual delight and a consummate satisfaction.

This is why brain workers are longer lived than other people. Creations keep the creator always young, since we are perpetually in contact with the new, the youthful, when we are creating. When we are stretching the mind into the unknown and calling out something new we seem to touch hands with the Creator himself.

People who never think or do anything original—mere automatons, cogs in the wheels of the great world's machinery, the mere routinists, do not know the exhilaration which comes from the consciousness of creating something new and fresh every day.

The creator feels that he is accomplishing something worth while, that he is doing something which the world needs, which will make it a little better place to live in, and the very newness, the novelty, the mystery of creation, makes it the most fascinating thing in the world.—Orison Swett Marden in Success Magazine.

Heart Burials.

The body of Louis IX., after his death at Carthage in 1270, is related to have been boiled in wine and water in order to preserve it for transportation, and it was then shipped by Charles of Anjou (I.) to Sicily. Here the flesh and viscera were deposited in the Benedictine Abbey of Monreale, near Palermo. The heart and the bones remained, by desire of the soldiers, in the camp. Later his son Philip (Le Hardi) having carried them and those of his brother, Tristan, into Italy, they were taken to Paris in 1271. On March 21 of that year the bones, reduced to ashes, were deposited temporarily in Notre Dame, whence they were presently borne in state to the Benedictine Abbey of St. Denis, and at each spot by the way where the bearers paused, seven in number, Philip subsequently caused a cross to be raised.

Charles of Anjou dying at Foggia, 1285, his heart was sent to Angers, while his body was entombed in San Gennaro, Naples. His viscera remained in the Duomo at Foggia.

Philip III. (Le Hardi) died of pestilence at Perpignan Oct. 5, 1285. His flesh was buried at Narbonne. His bones were transferred to St. Denis. His heart was given by Philip IV. (Le Bel) to the Dominicans of Paris.—London Notes and Queries.

Lincoln's Advice to Lawyers.
"Discourage litigation," says Lincoln's advice to lawyers. "Persuade your neighbors to compromise whenever you can. Point out to them how the nominal winner is often the real loser—in fees, expenses and waste of time. As a peacemaker the lawyer has a superior opportunity of becoming a good man. There will always be enough business. Never stir up a litigation. A worse man can scarcely be found than one who does this. Who can more nearly a fend than he who habitually overhauls the register of deeds in search of defects in titles whereon to stir up strife and put money in his pocket? A moral tone ought to be infused into the profession which should drive such men out of it."

It has been truly said that those words should be posted in every law office in the land, and it will be seen when Lincoln's record is fully examined that it was not a mere theorist who wrote them, but an active practitioner of wide experience who lived up to his own teaching.—Frederick Trevor Hill in Century.

Samuel Johnson and Women.
Of marriage in the abstract Johnson highly approved. "Every man," he said, "is a good man in proportion as he is unfit for the married state." He approved of a man contracting a second marriage and considered it as a compliment to the first wife. He acknowledged, however, that he had once been on the point of asking Mrs. Johnson not to marry again. She might well have granted his request without any fear of being tempted to break her promise. Johnson ridiculed the idea of a man being unwilling to marry a pretty woman lest he should have cause for jealousy. "No, sir," he said, "I would prefer a pretty woman unless there are objections to her. A pretty woman, if she has a mind to be wicked, can find a readier way than another, and that is all." He had, in fact, made a profound study of women from every point of view. And yet Johnson never took women quite seriously and would not hear of their assuming an equality with men, either in mental or bodily pursuits.

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